

# E-A-R fan mounts reduce noise and vibration, simplify assembly

## **Product Features**

*Control noise*

*Damp vibration*

*Reduce part count*

*Tool-less pull-through assembly*

E-A-R Specialty Composites offers a family of damped elastomeric mounts designed specifically for the miniature cooling fans needed by today's compact electronics. Resembling golf tees, the ISODAMP® thermoplastic mounts are available in both standard and custom configurations.

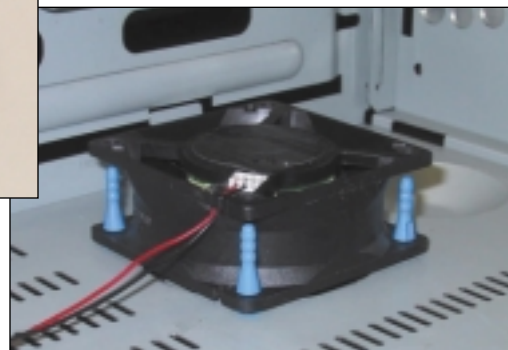
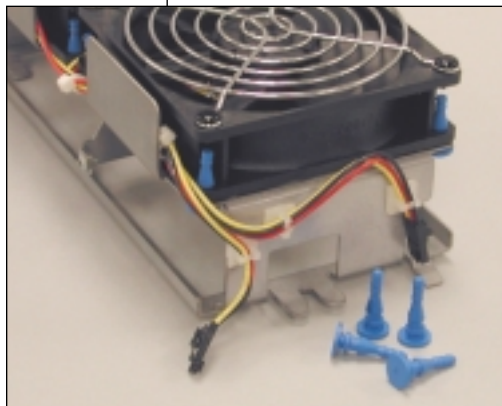
E-A-R's damped elastomeric fan mounts form resilient connections between a fan and the substrate to which it attaches. Thus they prevent the transfer



of structural vibration energy from component to component. This vibration can create unacceptable noise, interfere with equipment accuracy and ultimately shorten product life.

E-A-R's standard fan mount configurations accommodate a number of the most commonly

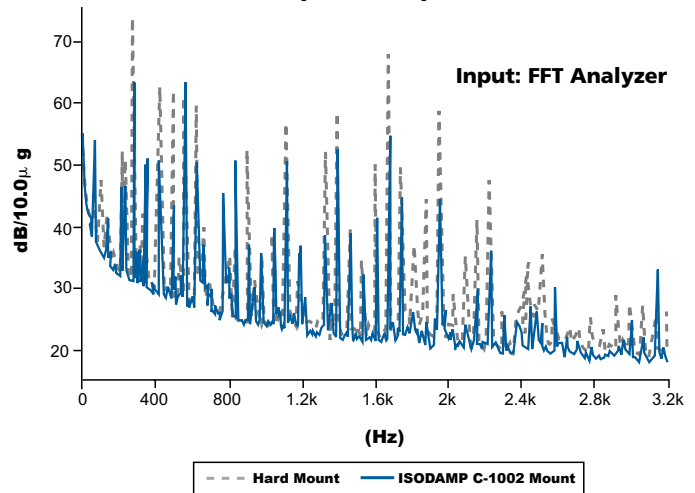
used fans. They are engineered with a unique design to facilitate assembly—usually replacing metal hardware or rubber mounts with no damping benefits—yet provide secure fastening, and effective vibration and shock control. ISODAMP moldable thermoplastics afford cost-effective custom designs as well.



## Fan mounts: Performance Data

E-A-R tested the vibration and acoustic spectra of a 12-volt DC axial fan, 60 x 60 x 2.5 mm, mounted in a satellite television receiver. The hydrowave-bearing (HWB) fan is rated at 32.0 dB(A). Tests compared two different mounting conditions: a hard mount (without an isolator) and a fan mount molded from ISODAMP C-1002 thermoplastic. The tests were conducted in a hemi-anechoic chamber with a noise floor level of 26 dBA. The graphs here compare the fan's noise and vibration levels in the two different modes.

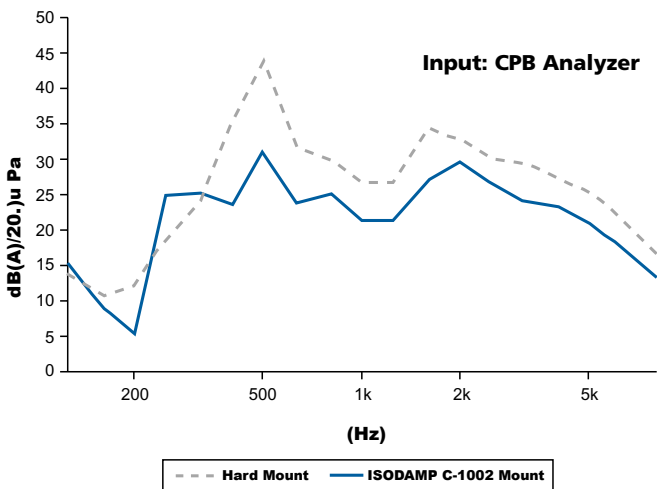
**Vibration Spectra: Top Chassis Cover**



### Vibration Results

	<b>Hard Mount (dB)</b>	<b>ISODAMP C-1002 Thermoplastic Insertion Loss (dB)</b>
<b>On chassis, near fan</b>	82.4	-7.4
<b>Chassis cover, top center</b>	77.1	-8.1

**Noise Spectra: Overhead Position (SPL@0.75m)**



### Acoustic Results

	<b>Hard Mount dB(A)</b>	<b>ISODAMP C-1002 Thermoplastic Insertion Loss dB(A)</b>
<b>Forward Acoustic (SPL@0.75m)</b>	41.4	-7.4
<b>Overhead Acoustic (SPL@0.75m)</b>	45.7	-8.1